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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/054,422	01/22/2002	Simon Peter Valentine	3Com-95	5221

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EXAMINER

BAUGH, APRIL L

ART UNIT	PAPER NUMBER
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2141

DATE MAILED: 02/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/054,422

Applicant(s)

VALENTINE ET AL.

Examiner

April L Baugh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 20020122.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-13 rejected under 35 U.S.C. 102(e) as being unpatentable by US Patent 6,377,987 to Kracht.

Regarding claim 1 and 11, Kracht teaches a method and computer readable medium including a computer program for determining the topology of a network when a network tree, built from data relating to discovered devices of the network, includes one or more unresolved branches, the method comprising: for each unresolved branch of the network tree, attempting to determine the type of each of the discovered network devices on the branch (column 4, lines 30-40 and column 7, lines 26-45) and if the type of each discovered network device on the branch is

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determined to be an endstation type, inferring that an undiscovered connecting device is present on the branch (fig.6a-6c and column 4, lines 55-60 and column 5, lines 2-7 and column 12, line 55-column 13, line 58).

Regarding claim 12, Kracht teaches a network management apparatus for determining the topology of a network, the apparatus comprising: a memory for receiving and storing data relating to discovered devices on the network (column 3, lines 55-67); a processor, coupled to the memory, the processor configured to build a network tree using the received data (fig.8 and column 15, lines 54-57) and, for each unresolved branch of the network tree, to attempt to determine the type of each of the discovered network devices on the branch (column 4, lines 30-40 and column 7, lines 26-45); whereas if the type of every discovered network device on an unresolved branch is determined to be an endstation type, the processor infers that an undiscovered connecting device is present on the branch (fig.6a-6c and column 4, lines 55-60 and column 5, lines 2-7 and column 12, line 55-column 13, line 58).

Regarding claim 2, Kracht teaches a method as claimed in claim 1, wherein if an undiscovered network device is inferred to be present on a branch the method further comprises: resolving the topology of the branch by determining that the discovered network devices on the branch are connected to respective ports of the inferred connecting device (fig.6a-6c and column 4, lines 55-60 and column 5, lines 2-7 and column 12, line 55-column 13, line 58).

Regarding claim 3, Kracht teaches a method as claimed in claim 1, further comprising: presenting the determined network topology as a network map, the map comprising icons representing network devices and lines representing network links, wherein the inferred

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connecting device is represented differently from a discovered connecting device (fig.8 and column 15, line 54-column 16, line 4).

Regarding claim 4, Kracht teaches a method as claimed in claim 1, wherein the received data comprises address table data for the ports of one or more managed connecting devices on the network, the address table data including the identity of each said port and the identity of other network devices which the port has learnt (column 3, lines 55-67 and column 4, lines 10-12 and column 4, line 60-column 5, line 7 and column 9, lines 4-13, 45-53, and 54-67).

Regarding claim 5, Kracht teaches a method as claimed in claim 4, wherein the step of building a network tree comprises selecting a discovered connecting device as a root node, and building a data representation of the tree from the root node (fig.8), the data representation comprising at least one branch from a respective port of the root node, each branch comprising the identity of the port and the identity of at least one child node on the branch (column 15, line 54-column 16, line 4).

Regarding claim 6, Kracht teaches a method as claimed in claim 5, wherein after building the network tree, the method comprises: determining whether the topology of one or more branches of the tree is unresolved (column 12, lines 55-67).

Regarding claim 7, Kracht teaches a method as claimed in claim 6, wherein the step of determining whether the topology of one or more branches of the tree is unresolved comprises: a) selecting a port of the root node; b) considering whether the branch from the selected port has more than one child node, and c) if the branch from the port has more than one child node, determining that the branch is unresolved (fig.5a-5b and column 11, line 62-column 12, line 30).

Regarding claim 8, Kracht teaches a method as in claim 7, further comprising repeating steps a), b) and c) for each port of each discovered connecting device (fig. 5a-5b and column 11, line 62-column 12, line 30).

Regarding claim 9, Kracht teaches a method as claimed in claim 1, wherein if the type of at least one discovered network device on the branch is not an endstation type, the topology of the branch is left unresolved (column 16, lines 50-57).

Regarding claim 10, Kracht teaches a method as claimed in claim 1, wherein the network tree is built using the steps of: receiving data relative to discovered devices on the network, and using the received data to build a network tree (fig. 8 and column 3, lines 55-67 and column 15, lines 54-57).

Regarding claim 13, Kracht teaches a network management apparatus as claimed in claim 12, further comprising: means for presenting a network map showing the determined topology of the network selected from the group consisting of a display and a printer (fig. 7 and 8 and column 17, lines 53-55).

Conclusion

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents are cited to further show the state of the art with respect to determining unmanaged devices in the topology of a network in general: Zeldin et al., Hansen et al., Dawes, Wood, Sharon et al., and Dawes et al.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to April L Baugh whose telephone number is 571-272-3877. The examiner can normally be reached on Monday-Friday 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on 571-272-3880. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ALB


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